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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,858	02/17/2004	Frank Meyer	127525	6216

25944 7590 04/03/2007  
OLIFF & BERRIDGE, PLC  
P.O. BOX 19928  
ALEXANDRIA, VA 22320

EXAMINER
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PONIKIEWSKI, TOMASZ

ART UNIT	PAPER NUMBER
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2165

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/03/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/779,858	<b>Applicant(s)</b> MEYER, FRANK	
	<b>Examiner</b> Tomasz Ponikiewski	<b>Art Unit</b> 2165	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 January 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### Remarks

1. The Amendment filed on January 8, 2007 has been received and entered.

Claims 1-10 are pending.

### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 5-6 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 5-6 do not list any hardware (i.e. computer) tied to the steps in order to store results or operate the steps of the claims therefore resulting in software only implementation. Claim should be amended to include some sort of computer or hardware tied to the body of the claim to realize their functionality.

Claims 5-6 list computational steps in a program without tangible, useful, concrete result because they do not specify an output at the end of the claims. It is unclear what the end result of the steps of the claim is. The claim has no output or storage to the final steps.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1, 5, 6, 10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification does not disclose a "calculator" as stated in the claims. As such the amendment is directed to a new matter not disclosed in the specification.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 7-8 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 recites the limitation "the symbolic values" in lines 4, 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the retained symbolic value" in line 11. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the other attributes" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites the limitation "the other attributes" in lines 13 and 17-18. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-3, 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kohavi et al. (US 6,278,464 B1) in view of Baatz et al. (US 2003/0115175 A1).

As per claim 1 Kohavi et al. is directed to A method of classifying multivalued data stored in data a memory of a computer system in a descending hierarchy, each datum being associated with particular initial values of attributes that are common to the data, the method comprising recursive steps of subdividing data sets, wherein, during each step of subdividing a set:

first, a calculator of the computer calculates discrete values for the attributes from the particular initial values of the data attributes of said set (column 1, lines 44-45, column 4, lines 50-65, wherein the labels are discrete values,

the memory is updated by adding the subsets in the descending hierarchy (column 5, lines 29-34).

Kohavi et al. does not teach the calculator subdivides said set into subsets as a function of a homogeneity criterion calculated on the basis of the discrete values for the attributes of said set

Baatz et al. teaches the calculator subdivides said set into subsets as a function of a homogeneity criterion calculated on the basis of the discrete values for the attributes of said set (Baatz et al., paragraph 0005, lines 5-10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the Kohavi et al. by teachings of Baatz et al. to include the calculator subdivides said set into subsets as a function of a homogeneity criterion calculated on the basis of the discrete values for the attributes of said set because it is not dependent on predetermined information.

As per claim 2 Kohavi et al. as modified is directed to the step of calculation of discrete values for the attributes, each initial attribute is transformed into a discrete attribute (Kohavi et al., column 4, lines 50-51).

As per claim 3 Kohavi et al. as modified is directed to binary attribute values are calculated from the particular initial attribute values of the data of said set, and wherein

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said set is subdivided into subsets as a function of the binary values (Kohavi et al., column 4, lines 56-59).

As per claim 8 Kohavi et al. as modified is directed to said set is subdivided on the basis of the discrete values of the most discriminating attribute, i.e. the attribute for which a homogeneity criterion for all of the discrete values of the other attributes in the resulting subsets is optimized (Kohavi et al., column 4, lines 59-65).

As per claim 9 Kohavi et al. as modified is directed to wherein, for any attribute, the homogeneity criterion is an estimate of the expectation of the conditional probabilities for correctly predicting the other attributes, given knowledge of this attribute (Kohavi et al., column 4, lines 61-65).

10. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kohavi et al. (US 6,278,464 B1) in view of Baatz et al. (US 2003/0115175 A1) and further in view of Chickering (US 6,505,185 B1).

As per claim 4 Kohavi et al. as modified does not teach the step of calculating the binary values for the attributes, for each attribute that is numerical, the median value of the particular initial values of said attribute in the data of said set is estimated and in that the value "true" is given to the binary attribute corresponding to said attribute for a

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datum of said set if the particular initial value of the numerical attribute of said datum is less than or equal to the estimated median value, else the value "false" is given thereto.

Chickering does teach the step of calculating the binary values for the attributes, for each attribute that is numerical, the median value of the particular initial values of said attribute in the data of said set is estimated and in that the value "true" is given to the binary attribute corresponding to said attribute for a datum of said set if the particular initial value of the numerical attribute of said datum is less than or equal to the estimated median value, else the value "false" is given thereto (Chickering, column 10, lines 5-12, wherein the equal or more is "true" and less than is given the "false" values).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kohavi et al. as modified by teachings of Chickering to include teach the step of calculating the binary values for the attributes, for each attribute that is numerical, the median value of the particular initial values of said attribute in the data of said set is estimated and in that the value "true" is given to the binary attribute corresponding to said attribute for a datum of said set if the particular initial value of the numerical attribute of said datum is less than or equal to the estimated median value, else the value "false" is given thereto because median calculation is a well known function in the art.

***Allowable Subject Matter***



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11. Claims 5-7 and 10 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 1st paragraph, set forth in this Office action. No art is being presented.

### ***Conclusion***

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

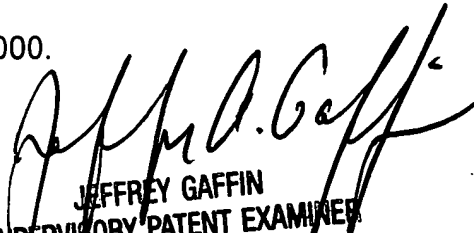
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tomasz Ponikiewski whose telephone number is (571)272-1721. The examiner can normally be reached on 8:00-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A. Gaffin can be reached on (571)272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tomasz Ponikiewski  
March 21, 2007

  
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